

Second lowest minimum for Arctic sea ice

16 September 2011 - Arctic sea ice extent appears to have reached its second lowest minimum since records began, according to the latest figures from the National Snow and Ice Data Centre (NSIDC) in the US.



Sea ice extent was 4.33 million square kilometres at its lowest point on 9 September, just greater than the previous lowest minimum set in 2007.

Satellite records began in 1979 and have shown a long-term decline in sea ice extent. However, the rate of decline has accelerated in the past 15 years and the last five years make up the lowest five extents in the 32-year record.

Dr **Helene Hewitt**, an expert in climate modelling at the Met Office, said: "The low ice extent this year appears to be mostly caused by high pressure systems that have persisted for much of the summer over the Arctic. This year's minimum adds to the continuing pattern of accelerating ice loss over the last 15 years."

Climate models which simulate future Arctic sea ice extent show wide variations, but Met Office results suggest the area could be nearly ice-free in summer as early as 2040.

Dr Hewitt added that the models do not suggest the current accelerated rate of decline would continue or that there was any 'tipping point' from which ice extent could not recover.

She said: "Periods of accelerating ice loss are not unusual in climate models, but there is no reason to expect that to continue. We could see periods of relatively small loss in summer sea ice in the future.

"There is certainly no indication from observations or models that a tipping point in Arctic sea ice has been reached. Indeed, models show that if there is a decrease in global temperature, summer ice extent could recover."

The **NSIDC results** broadly agree with those from the other two organisations monitoring sea ice extent, the **University of Bremen** and the **Japan Aerospace Exploration Agency**. All use slightly different methods, with Bremen concluding this year is an all time low, while Japanese data shows this year as the second lowest minimum.

Next month the Met Office will publish an in-depth article on modelling of Arctic sea ice extent.

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